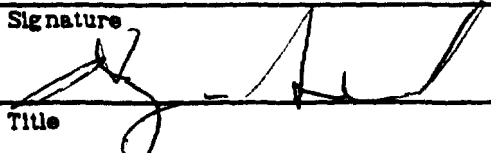


WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT.  
U.S. CODE, TITLE 18, SECTION 1001.

I certify that the statements in this application are true and correct to the best of my knowledge and belief, and are made in good faith.

Name of Applicant Harvey M. Budd	Signature 
Date August 8, 1989	Title President Monroe Television, Inc.

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT  
AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The principal purpose for which the information will be used is to determine if the benefit requested is consistent with the public interest. The staff, consisting variously of attorneys, analysts, engineers and applications examiners, will use the information to determine whether the application should be granted, denied, dismissed, or designated for hearing. If all the information is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Accordingly, every effort should be made to provide all necessary information. Your response is required to obtain the requested authority.

Public reporting burden for this collection of information is estimated to vary from 71 hours 45 minutes to 301 hours 30 minutes with an average of 118 hours 28 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Office of Managing Director, Washington, D.C. 20554, and to the Office of Management and Budget, Paperwork Reduction Project (3030-0027), Washington, D.C. 20503.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.



RECEIVED

BARAFF, KOERNER, OLENDER & HOCHBERG, PSC. 1 1989

ATTORNEYS AT LAW  
2033 M STREET, N.W., SUITE 700  
WASHINGTON, D. C. 20036-3355  
(202) 452-8200

Federal Communications Commission  
Office of the Secretary

B. JAY BARAFF  
ROBERT L. OLENDER  
JAMES A. KOERNER  
PHILIP R. HOCHBERG  
AARON P. SHAINIS  
LEE J. PELTZMAN  
JAMES E. MEYERS  
ALAN E. ARONOWITZ  
RANDALL D. FISHER

OF COUNSEL  
ROBERT BENNETT LUBIC

TELECOPY  
(202) 223-2695

September 1, 1989

REC'D MASS MED BUR  
SEP 11 1989  
VIDEO SERVICES

\* TEXAS BAR ONLY

Ms. Donna R. Searcy, Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, D.C. 20554

Re: WTSU-TV, Channel 63, Montgomery, Alabama

Dear Ms. Searcy:

Transmitted herewith, on behalf of Troy State University System, are an original and two (2) copies of an application for the modification of facilities of the above-captioned construction permit for non-commercial Station WTSU-TV, Channel 63, Montgomery, Alabama.

This application should be simultaneously considered with the application (File No. BNPCT-890809KE) of Monroe Television, Inc. to modify the construction permit of WHSG(TV), Channel 63, Monroe, Georgia.

In addition, FAA approval for the proposal herein contained will be filed with the Commission immediately upon its receipt in Washington.

If there are any questions concerning this matter, please communicate directly with the undersigned.

Very truly yours,

*Alan E. Aronowitz*

Alan E. Aronowitz

AEA/rr  
Enclosures  
cc w/copy of application:  
Mr. David Bennett  
Federal Communications Commission  
Room 700, 1919 M Street, N.W.  
Washington, D.C. 20554  
(By Hand)

**APPLICATION FOR CONSTRUCTION PERMIT FOR  
NONCOMMERCIAL EDUCATIONAL BROADCAST STATION**  
(Carefully read instructions before filling out Form—RETURN ONLY FORM TO FCC)

For Commission Use Only

File No.

**RECEIVED**

**SEP 1 1989**

**Section I**

**General Information**

**1. Name of Applicant**

The Troy State University System

Street Address  
Federal Communications Commission  
Office of the Secretary

University Avenue

City

Troy

State

Ala

ZIP Code

36108-2010

Telephone No.

(Include Area Code)

(205) 566-5814

Send notices and communications to the following named person at the address below:

Name

Dwight Cleveland  
Department of Radio and Television  
Troy State University

Street Address

University Avenue

City

Troy

State

Ala

ZIP Code

36108-2010

Telephone No.

(Include Area Code)

(205) 566-5814

2. This application is for: ☐ AM ☐ FM ☒ TV

(a) Channel No. or Frequency: 63

(b) Community of license:

City

State

Montgomery

Ala

(c) Check one of the following boxes:

- ☐ Application for new station  
☐ Major Change in Existing station; call sign: \_\_\_\_\_  
☐ Minor Change in Existing station; call sign: \_\_\_\_\_  
☒ Modification of Construction Permit; File No. of CP: BPET-870716KF  
☐ Amendment to Pending Application; Reference Number (ARN): \_\_\_\_\_

NOTE: It is not necessary to use this form to amend a previously filed application. Should you do so, however, please submit only Section I and those other portions of the form that contain the amended information.

3. Is this application mutually exclusive with a renewal application?

☐ YES ☒ NO

If Yes, State:

Call letters:

Community of license:

City

State

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name of Applicant The Troy State University System

1. Purpose of authorization applied for:

☐ Construct a new station

☐ Install Auxiliary System

Change:

☒ Effective radiated power

☐ Frequency

☒ Antenna Height above average terrain

☒ Transmitter location

☐ Studio location outside community of license

☒ Other (summarize briefly the nature of the changes proposed)

Application for modification of construction permit, File No.  
BPET-870716KF

2. Community of license:

State

City or Town

Alabama

Montgomery

3. Facilities requested:

Channel No.

Zone

Maximum effective radiated power

63

III

Visual

2417 kW MAX-DA  
(33.83 dBk)

4. Geographical Coordinates of antenna (to nearest second)

North Latitude 32° 17' 24"

West Longitude 86° 36' 40"

5. Height of antenna radiation center:

above average terrain (HAAT)

above mean sea level

above ground

704 ft.

871 ft.

476 ft.

(215 m)

(265.5 m)

(145.1 m)

5. Overall height of complete antenna structure above ground (with obstruction lighting) 500 ft.

(152.4 m)

7. Antenna:

Manufacturer

Model No.

Electrical beam tilt

☒ \*

☐

Bogner

BU132

0.5

degrees

DA

Non-DA

\*(Pattern B, 180°)

Azimuth of major lobe(s)

Mechanical beam title

35 & 105 degrees true

N/A degrees

8. Transmitter location:

State

County

Alabama

Lowndes

City or Town

Street Address or Other Identification

Near

Lowndesboro

West side of State Rt. 97, 2.6 km north  
of intersection with U.S. Rt. 80

9. (a) If directional antenna is proposed, give full details including horizontal and vertical plane radiation patterns as Exhibit No. Fig. 4 pursuant to Section 73.685 of the Commission's Rules.

Fig. 4

- (b) If electrical or mechanical beam tilting is proposed, describe fully in Exhibit No. \_\_\_\_ pertinent vertical and horizontal radiation patterns.

Fig. 6

10. Attach as Exhibit No. \_\_\_\_ map(s) (Sectional Aeronautical charts or equivalent) of the area proposed to be served and show thereon:

- (a) Proposed transmitter location and the radials along which the profile graphs have been prepared;
- (b) The City Grade, Grade A and Grade B contours predicted;
- (c) On the map(s) showing the City Grade contour, clearly indicate the legal boundaries of the principal community proposed to be served;
- (d) Scale of miles;
- (e) Area (sq. mi.) and population (latest census) within Grade B contour.

11. Will the proposed City Grade contour completely encompass the principal community, without major terrain obstruction?

☒ Yes ☐ No

If no, attach as Exhibit No. \_\_\_\_ justifications.

12. If the main studio will not be within the boundaries of the principal community to be served, attach as Exhibit No. \_\_\_\_ a justification pursuant to Section 73.1125 of the Commission's Rules. \*Will comply with 47 CFR 73.1125(a).

15. Tabulation of Terrain Data. (Calculated in accordance with the procedure prescribed in Section 73.684 of the Commission's Rules, utilizing 7.5 minute topographic maps if available).

Radial bearing (degrees true)	Height of antenna radiation center above average elevation of radial (2-10 mi.) Feet	Predicted Distance		
		To the City Grade Contour Miles	To the Grade A Contour Miles	To the Grade B Contour Miles
0°	_____	_____	_____	_____
45°	_____	_____	_____	_____
90°	_____	_____	_____	_____
135°	_____	See Figure 5		
180°	_____	_____	_____	_____
225°	_____	_____	_____	_____
270°	_____	_____	_____	_____
315°	_____	_____	_____	_____
(*) _____	_____	_____	_____	_____

\*Radial over principal community, if not included above. DO NOT include in average.

16. Environmental Statement. See Part I, Subpart 1 of the Commission's Rules.

Would a Commission grant of this application be a major action as defined by Section 1.1305 of the Commission's Rules?

☐ YES ☒ NO

If Yes, attach as Exhibit No. \_\_\_\_ a narrative statement in accordance with Section 1.1311 of the Commission's Rules.

If No, explain briefly. Categorically excluded as per 47 CFR 1.1306.  
See technical narrative.

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

November 4, 1988

W. Jeffrey Reynolds

Name

*W. Jeffrey Reynolds*

Signature (Check appropriate box below)

1019 19th Street, N. W., 3rd Floor

Address (Include ZIP Code)

Washington, D. C. 20036

(202) 223-6700

Telephone No. (include Area Code)

☐ Technical Director

☐ Registered Professional Engineer

☐ Chief Operator

☒ Technical Consultant

☐ Other (specify)

Name of Applicant The Troy State University System	Call Sign WTSU-TV	Station Location Montgomery, Alabama
Purpose of Application (Put "X" in appropriate box) <input checked="" type="checkbox"/> New antenna construction <input type="checkbox"/> Alteration of existing antenna structure <input type="checkbox"/> Change in location	Facilities Requested CH 63 (764-770 MHz), ERP 2417 kW (MAX-DA) EAH 215 meters	

1. Location of Antenna:
- |         |         |                  |
|---------|---------|------------------|
| State   | County  | City or Town     |
| Alabama | Lowndes | near Lowndesboro |

Exact antenna location (street address). If outside city limits, give name of nearest town and distance and direction of antenna from town.  
West side of State Rt. 97, 2.6 km north of intersection with U.S. Rt. 80,  
0.7 km north of Lowndesboro.

Geographical coordinates (to nearest second). For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude      32° 17' 24"      West Longitude      86° 36' 40"

2. Is the proposed site the same transmitter-antenna site of other stations authorized by the Commission or specified in another application pending before the Commission? ☐ YES ☒ NO

If Yes, give call sign:

3. Has the FAA been notified of proposed construction? FAA Southern Regional Office ☒ YES ☐ NO  
If Yes, give date and office where notice was filed. November 1, 1988

4. List all landing areas within 5 miles of antenna site. Give distance and direction to the nearest boundary of each landing area from the antenna site.

Landing Area	Distance	Direction
(a) None		
(b)		
(c)		

5. Attach as Exhibit No. \_\_\_\_\_ a description of the antenna system, including whether tower(s) are self-supporting or guyed. If a directional antenna, give spacing and orientation of towers. Single, guyed, uniform cross-section steel tower to support a top-mounted UHF TV transmitting antenna.

Tower		#1	#2	#3	#4	#5	#6
Overall height above ground (include obstruction lighting)	meters	152.4					
	feet	500					
Overall height above mean sea level (include obstruction lighting)	meters	272.8					
	feet	895					



Fig. 3

6. Attach as Exhibit No \_\_\_\_ a vertical plan sketch for the proposed total structure (including supporting building, if any) giving heights above ground in feet and meters for all significant features. Clearly indicate existing portions, noting lighting, and distinguish between

*du Treil, Lundin & Rackley, Inc.*

A Subsidiary of A. D. Ring, P. C.

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TECHNICAL EXHIBIT  
APPLICATION FOR MODIFICATION  
OF CONSTRUCTION PERMIT  
THE TROY STATE UNIVERSITY SYSTEM  
STATION WTSU-TV  
MONTGOMERY, ALABAMA

November 4, 1988

CH 63

2417 KW (MAX-DA)

215 M

TECHNICAL EXHIBIT  
APPLICATION FOR MODIFICATION  
OF CONSTRUCTION PERMIT  
THE TROY STATE UNIVERSITY SYSTEM  
STATION WTSU-TV  
MONTGOMERY, ALABAMA

CH 63

2417 KW (MAX-DA)

215 M

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Figure 2	Transmitter Site and Vicinity
Figure 3	Proposed Antenna and Supporting Structure
Figure 4	Antenna Patterns
Figure 5	Tabulation of Average Elevations and Distances to Coverage Contours
Figure 6	Predicted Coverage Contours
Figure 7	Allocation Study

TECHNICAL EXHIBIT  
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THE TROY STATE UNIVERSITY SYSTEM  
STATION WTSU-TV  
MONTGOMERY, ALABAMA  
CH 63                      2417 KW (MAX-DA)                      215 M

Technical Narrative

The technical exhibit of which this narrative is part was prepared on behalf of The Troy State University System in support of an application for modification of the construction permit for station WTSU-TV at Montgomery, Alabama, File No. BPET-870716KF. Station WTSU-TV is authorized by an outstanding construction permit to operate on channel 63 (764-770 MHz) from a transmitter site located at 1369 Adrian Lane in Montgomery, Alabama with a maximum nondirectional visual effective radiated power of 200 kilowatts (23 dBk) and an effective antenna height of 211 meters (692 feet) above average terrain. The purpose of this modification is to change the transmitter site and antenna system, and to increase the maximum visual effective radiated power to 2417 kilowatts and antenna height above average terrain to 215 meters (704 feet). Channel 63 is a noncommercial educational allotment at Montgomery.

The proposal would not be subject to environmental processing in accordance with 47 CFR

1.1306. The Southern Regional Office of the Federal Aviation Administration has been notified of the proposed construction. The instant application conforms with all applicable rules and regulations of the Federal Communications Commission. Specifications for the proposed operation are included herein as Figure 1.

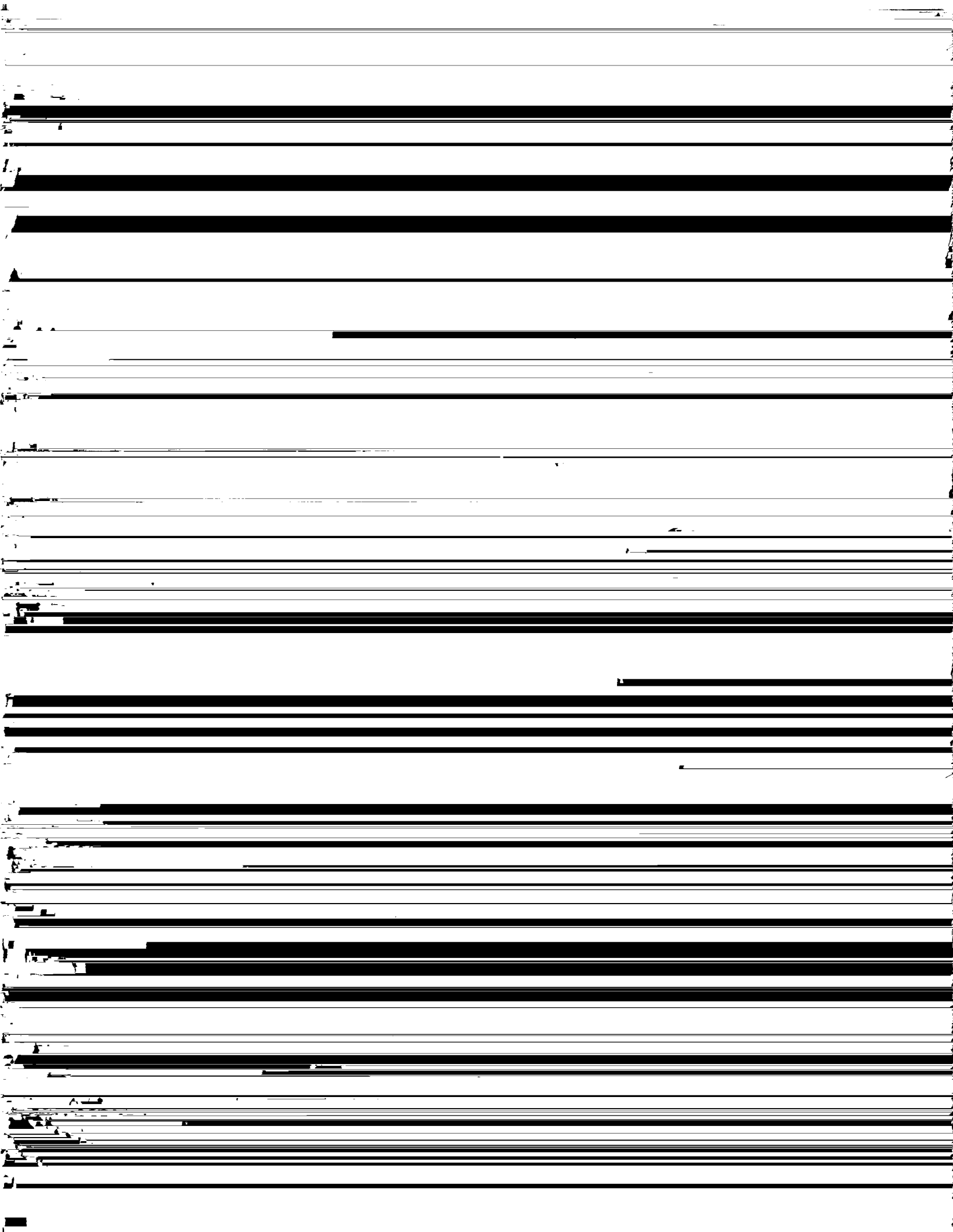
Proposed Transmitter Location

The transmitter site is in Lowndes County on the west side of State Route 97, 2.6 kilometers north of its intersection with U.S. Route 80, near Lowndesboro, Alabama. The proposed tower location is uniquely described by the following geographic coordinates:

32° 17' 24" North Latitude

86° 36' 40" West Longitude.

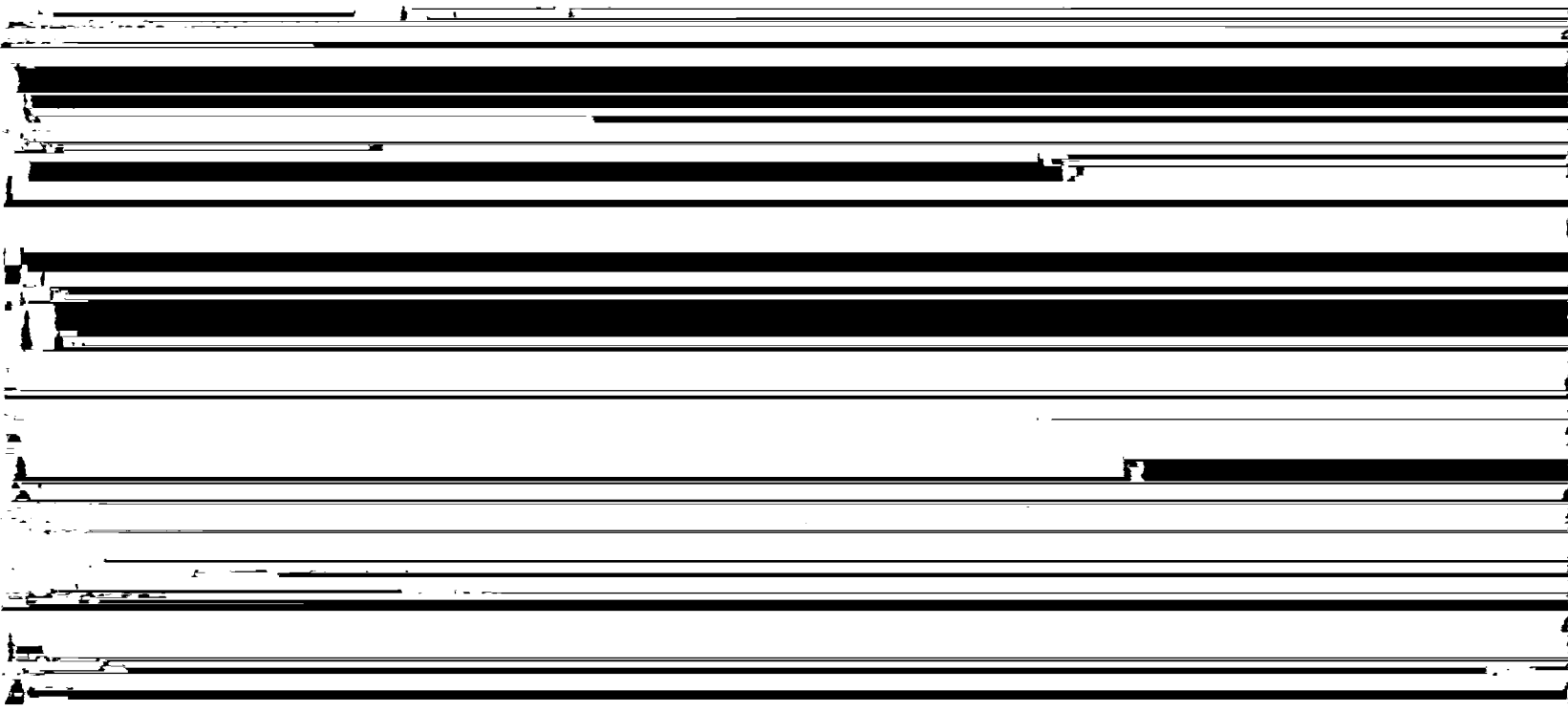
Figure 2 is a portion of the quadrangle map showing the proposed site and vicinity. There are no known AM, FM or TV facilities within 16 kilometers (10



CFR 73.684 and Figure 10(b) of 47 CFR 73.699 except that, pursuant to current FCC practice, no consideration was given to terrain roughness correction factors.

The average elevations from 3.2 to 16.1 kilometers from the proposed site were obtained from the NGDC 30-second computer database. The standard eight radials spaced at 45-degree intervals and an additional radial through Montgomery were used for determining the average elevations and the distances to coverage contours.

A tabulation of average elevations and distances to coverage contours is included herein as Figure 5. The depression angle to the radio horizon, as determined by the formula in 47 CFR 73.684(c), was between 0.38 and 0.41 degree. Radiation at the depression angles pertinent to the Grade A (74 dBu) and Grade B (64 dBu) contours were in all cases greater than 90 percent of the maximum field strength in the vertical plane. Therefore,



Determination of Population and Area

The population to be served within the predicted Grade B contour was determined by use of a computer program which totals the population within census enumeration districts located within the Grade B contour. The 1980 census was employed. The land area within the Grade B contour was determined by computer using a root mean square method of calculation.

Environmental Considerations

The proposed facilities were evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation." Using a higher than realizable relative field value of 0.5 at depression angles toward the tower base (-60 to -90 degrees elevation), a maximum visual power of 2417 kilowatts and a maximum aural power of 532 kilowatts (22 percent maximum visual power), the minimum height needed to meet the FCC specified guidelines, as determined from equation (6) on page 13 of the Bulletin, is 70 meters. As the bottom of the antenna will be approximately 138 meters above ground level, the radiofrequency field exposure in the vicinity of the tower will be well within the FCC guidelines.

The proposal is categorically excluded from environmental processing, as it appears to meet all of



the criteria for such an exclusion in 47 CFR 1.1306. The proposal does not involve construction at a site location specified under 1.1307(a)(1)-(5), is not expected to require high intensity lighting under 47 CFR 1.1307(a)(6) and the human exposure to radiofrequency radiation is predicted to be within the standards specified in 47 CFR 1.1307(b).

*W. Jeffrey Reynolds*

W. Jeffrey Reynolds

November 4, 1988

TECHNICAL EXHIBIT  
APPLICATION FOR MODIFICATION  
OF CONSTRUCTION PERMIT  
THE TROY STATE UNIVERSITY SYSTEM  
STATION WTSU-TV  
MONTGOMERY, ALABAMA

CH 63                      2417 KW (MAX-DA)                      215 M

Technical Specifications

Channel	63
Frequency band	764-770 MHz
Site coordinates	32° 17' 24" North Latitude 86° 36' 40" West Longitude
Site elevation above mean sea level	120.4 m (395 ft)
Overall height of antenna and supporting structure with lighting	
Above ground	152.4 m (500 ft)
Above mean sea level	272.8 m (895 ft)
Average elevation above mean sea level of standard eight radials 3.2-16.1 kilometers (2-10 miles)	51.0 m (167 ft)
Height of antenna radiation center	
Above ground	145.1 m (476 ft)
Above mean sea level	265.5 m (871 ft)
Above average terrain	215 m (704 ft)

Transmission line	*Cablewave Systems, Air Dielectric 50 ohm
Nominal diameter	15.56 cm (6-1/8 in)
Length	152.4 m (500 ft)
Efficiency (0.85 dB loss)	82.2%
Antenna	*Bogner, type BUI32
Pattern	Pattern B, 180° (Directional)
Electrical beam tilt	0.5°
Power gain	
Maximum**	73.5 (18.66 dB)

Proposed Operation

	<u>Visual</u>		<u>Aural</u>	
Transmitter output power***	40 kW	16.02 dBk	4 kW	6.02 dBk
Transmission line loss		0.85 dB		0.85 dB
Antenna input power		15.17 dBk		5.17 dBk
Antenna gain				
Maximum**		18.66 dB		18.66 dB
Effective radiated power				
Maximum**	2417 kW	33.83 dBk	242 kW	23.83 dBk

\*Or equivalent.

\*\*At 0.5 degree below horizontal and oriented toward 35 and 105 degrees true.

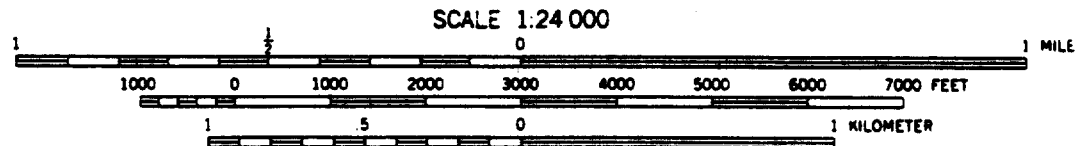
\*\*\*Measured at output of notch diplexer.

**LOWNDESBORO, ALA.**

SE/4 AUTAUGAVILLE 15' QUADRANGLE  
N3215-W8630/7.5

1981

DMA 3648 I SE-SERIES V844



CONTOUR INTERVAL 10 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1929

**PROPOSED TRANSMITTER LOCATION**

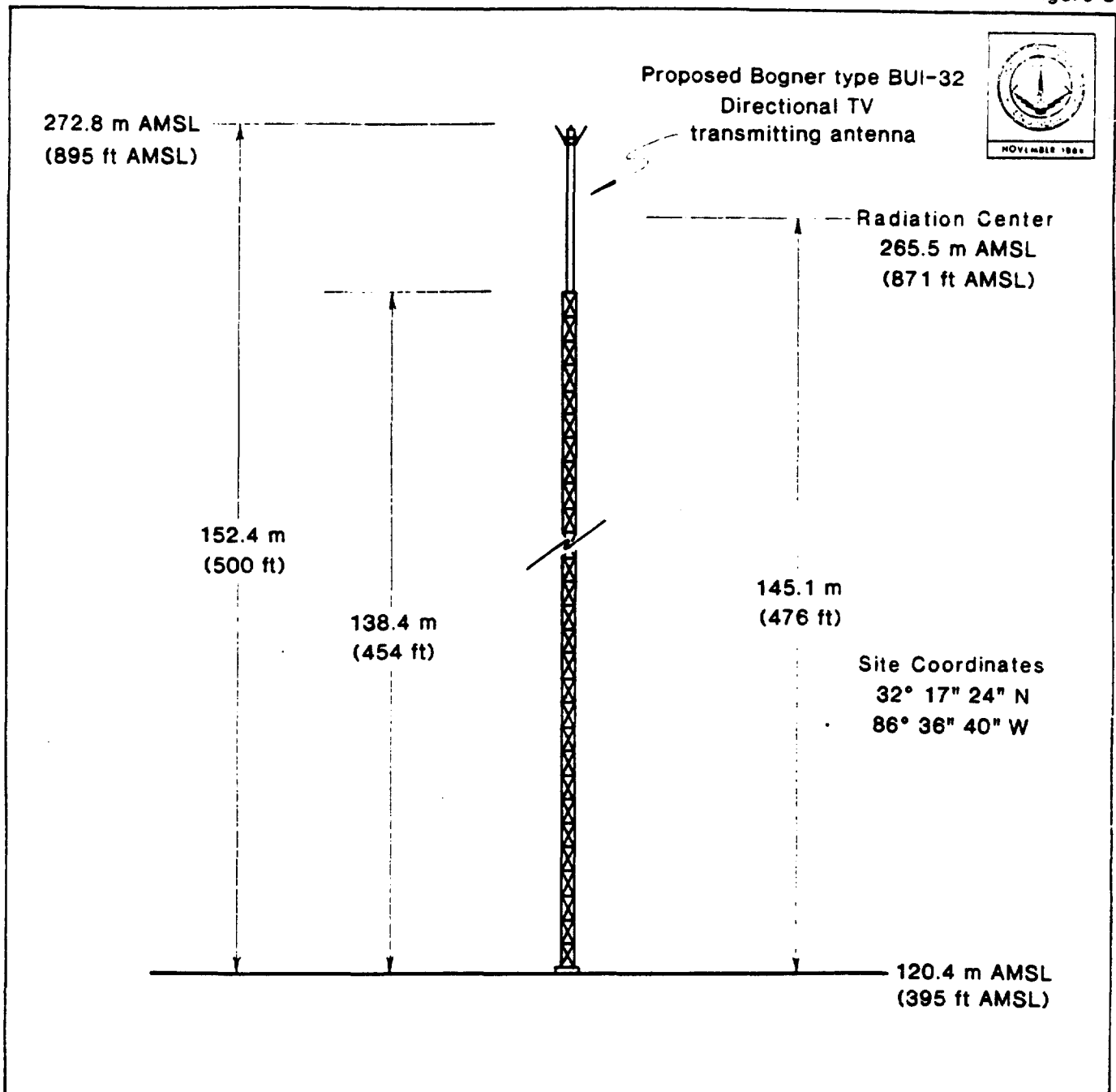
**THE TROY STATE UNIVERSITY SYSTEM  
STATION WTSU-TV**

**MONTGOMERY, ALABAMA**

**CH 63 2417 KW (MAX-DA) 215 M**

**du Treil, Lundin & Rackley, Inc. Washington, D.C.**

Figure 3



## PROPOSED ANTENNA AND SUPPORTING STRUCTURE

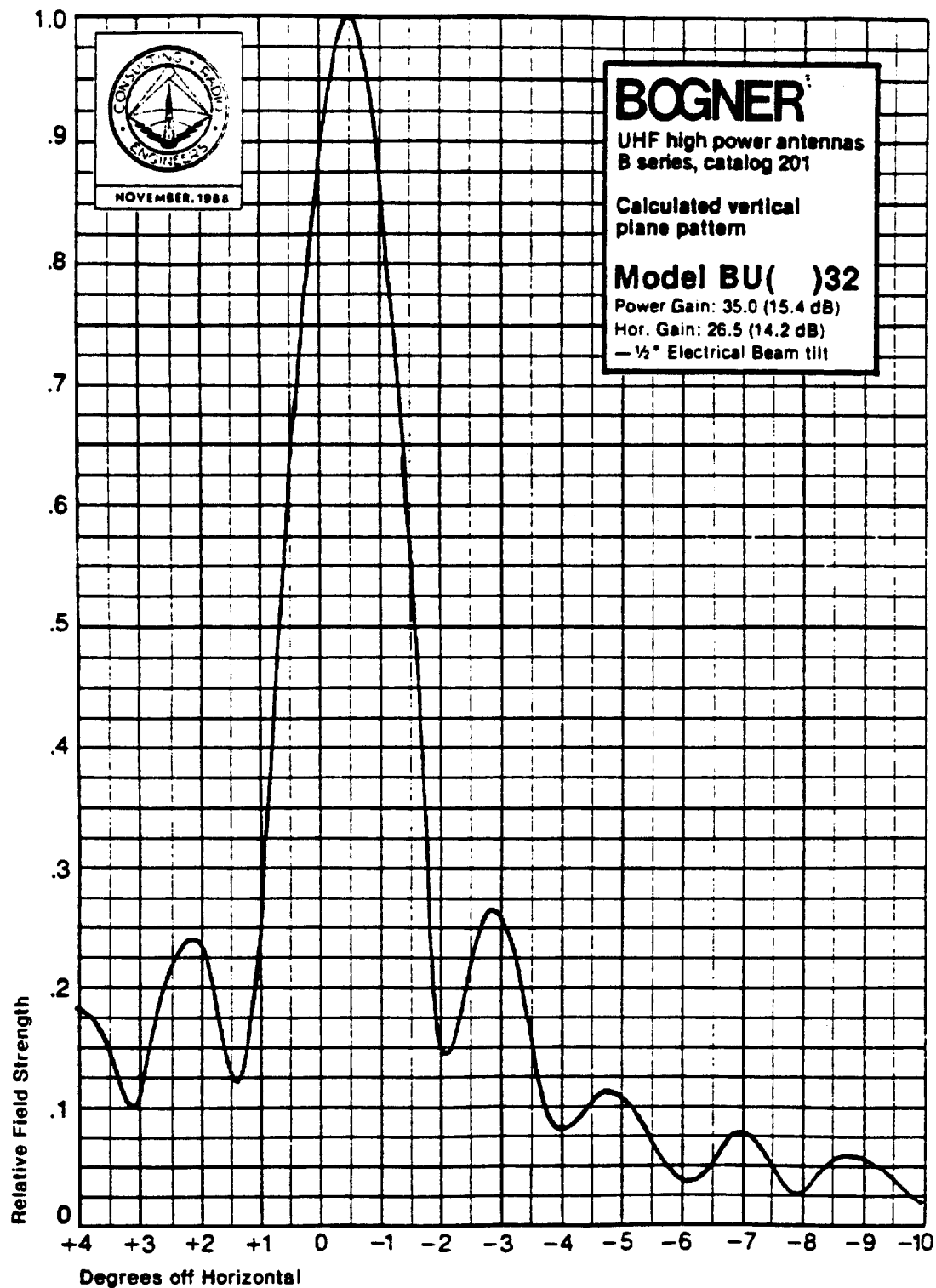
THE TROY STATE UNIVERSITY SYSTEM

STATION WTSU-TV

MONTGOMERY, ALABAMA

CH 63 2417 KW (MAX-DA) 215 M

du Treil, Lundin & Rackley, Inc. Washington, D.C.



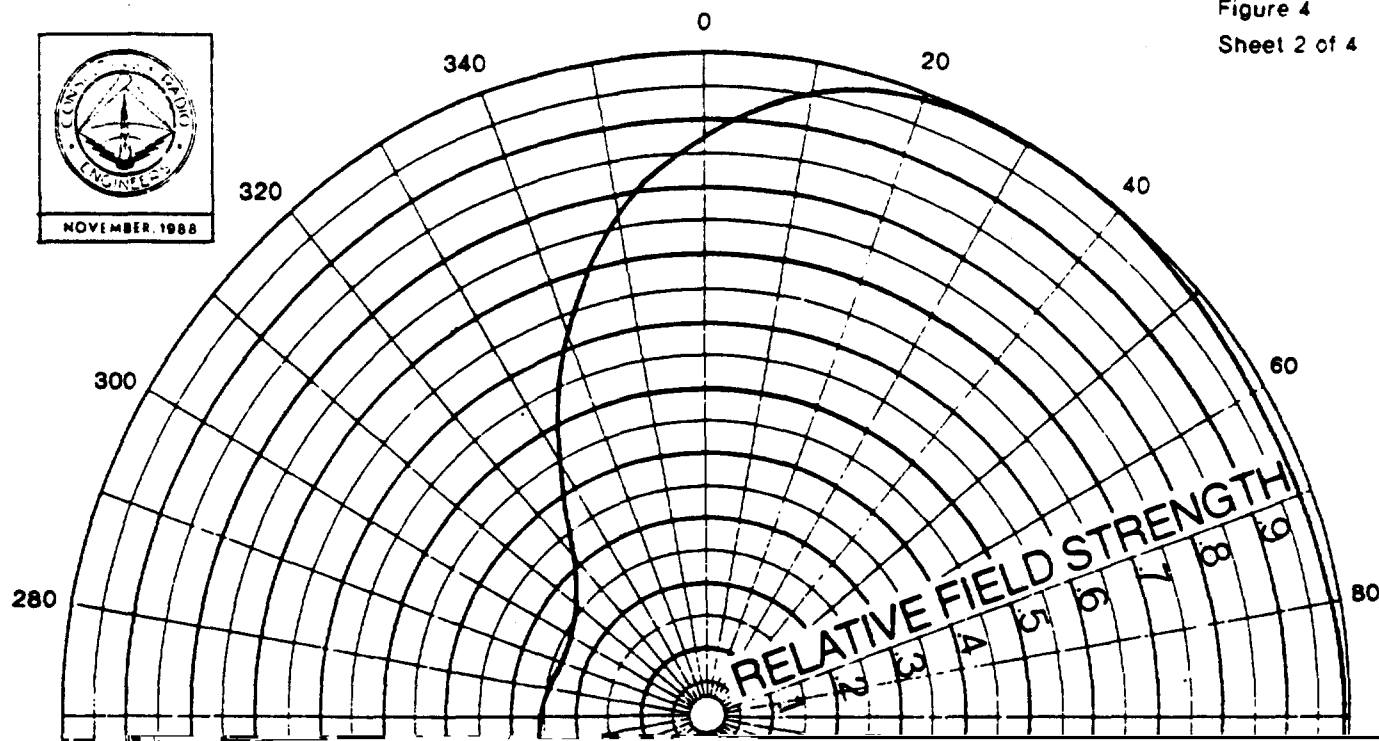
## VERTICAL PLANE RADIATION PATTERN

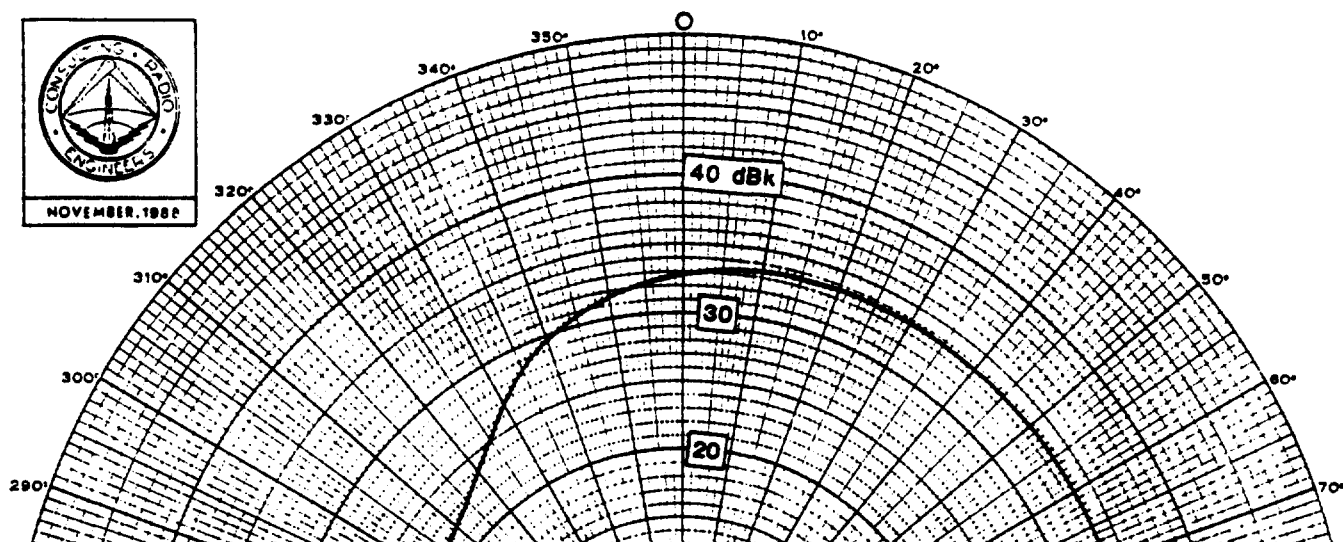
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CH 63 2417 KW (MAX-DA) 215 M

du'Treil, Lundin & Rackley, Inc. Washington, D.C.







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MONTGOMERY, ALABAMA

CH 63      2417 KW (MAX-DA)      215 M

Horizontal Plane Relative Field  
Values For Proposed Directional Antenna

<u>Azimuth (deg. T.)</u>	<u>Relative Field</u>	<u>Azimuth (deg. T.)</u>	<u>Relative Field</u>
0	0.87	170	0.40
10	0.95	180	0.30
20	0.98	190	0.26
30	0.99	200	0.24
35**	1.00	210*	0.23
40	0.99	220	0.24
45	0.99	225	0.25
50	0.98	230	0.26
60	0.98	240	0.26
70	0.98	250**	0.27
80	0.98	260	0.26
90	0.99	270	0.26
100	0.99	280	0.24
105**	1.00	290*	0.23
110	0.99	300	0.24
120	0.98	310	0.26
130	0.93	315	0.28
135	0.91	320	0.32
140	0.86	330	0.45
150	0.74	340	0.62
160	0.57	350	0.77

\*Minima  
\*\*Maxima